

hat is claimed is:

1. A circuit arrangement for operating an exhaust-gas probe including a NOx double chamber sensor, said exhaust-gas probe including: a heatable solid-state electrolyte body having first and second pump chambers; diffusion barriers for separating said chambers from each other and from the exhaust gas; a third chamber communicating with the atmosphere; an external pump electrode exposed to the exhaust gas; a first oxygen pump electrode disposed in said first pump chamber; a second oxygen pump electrode disposed in at least one of said first and second pump chambers; a nitrogen oxide pump electrode disposed in said second pump chamber; an air reference electrode disposed in said third chamber; and, said circuit arrangement comprising:

circuit means for applying pregivable voltages to said electrodes, respectively, and for generating, in a controlled manner, the following: a first oxygen pump current between said first oxygen pump electrode and said external pump electrode; a second oxygen pump current between said second oxygen pump electrode and said external pump electrode; and, a nitrogen oxide pump current between said nitrogen oxide pump electrode and said external pump electrode; and,

said circuit means including: only one pump voltage generating circuit unit; switching means for switching said pump voltage generating circuit unit between respective ones of said pump electrodes; and, said pump voltage generating unit functioning to generate, in a controlled manner, all of the voltages applied to said pump electrodes in dependence upon respective reference voltages.

